

§ 52.01-55

at or near the center of the crown sheet of each combustion chamber.

(f) Boilers constructed with a separate combustion chamber for each individual furnace shall be fitted with a fusible plug in the center of the crown sheet of each combustion chamber.

(g) Boilers of types not provided for in this section shall be fitted with at least one fusible plug of such dimensions and located in a part of the boiler as will best meet the purposes for which it is intended.

(h) Fusible plugs shall be so fitted that the smaller end of the filling is in direct contact with the radiant heat of the fire, and shall be at least 1 inch higher on the water side than the plate or flue in which they are fitted, and in no case more than 1 inch below the lowest permissible water level.

(i) The lowest permissible water level shall be determined as follows:

(1) Vertical firetube boilers, one-half of the length of the tubes above the lower tube sheets.

(2) Vertical submerged tube boilers 1 inch above the upper tube sheet.

(3) Internally fired firetube boilers with combustion chambers integral with the boiler, 2 inches above the highest part of the combustion chamber.

(4) Horizontal-return tubular and dry back Scotch boilers, 2 inches above the top row of tubes.

(j) [Reserved]

(k)(1) Fusible plugs shall be cleaned and will be examined by the marine inspector at each inspection for certification, periodic inspection, and oftener if necessary. If in the marine inspector's opinion the condition of any plug is satisfactory, it may be continued in use.

(2) When fusible plugs are renewed at other than the inspection for certification and no marine inspector is in attendance, the Chief Engineer shall submit a written report to the Officer in Charge, Marine Inspection, who issued the certificate of inspection informing him of the renewal. This letter report shall contain the following information:

(i) Name and official number of vessel.

(ii) Date of renewal of fusible plugs.

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(iii) Number and location of fusible plugs renewed in each boiler.

(iv) Manufacturer and heat number of each plug.

(v) Reason for renewal.

[CGFR 68-82, 33 FR 18815, Dec. 18, 1968, as amended by CGD 81-79, 50 FR 9432, Mar. 8, 1985; USCG-1999-4976, 65 FR 6500, Feb. 9, 2000; USCG-2003-16630, 73 FR 65160, Oct. 31, 2008]

§ 52.01-55 Increase in maximum allowable working pressure.

(a) When the maximum allowable working pressure of a boiler has been established, an increase in the pressure settings of its safety valves shall not be granted unless the boiler design meets the requirements of this subchapter in effect at the time the boiler was contracted for or built; but in no case will a pressure increase be authorized for boilers constructed prior to the effective date of the regulations dated November 19, 1952, if the minimum thickness found by measurement shows that the boiler will have a factor of safety of less than $4\frac{1}{2}$. The piping system, machinery, and appurtenances shall meet the present requirements of this subchapter for the maximum allowable working pressure requested. An increase in pressure shall be granted only by the Commandant upon presentation of data or plans proving that the requested increase in pressure is justified.

(b) When an existing boiler is replaced by a new boiler designed to operate at pressures in excess of the pressure indicated on the certificate of inspection for the previous boiler, an analysis of the complete system shall be made, including machinery and piping, to insure its compatibility with the increased steam pressure. The maximum allowable working pressure on the certificate of inspection shall be based on the results of this analysis.

§ 52.01-90 Materials (modifies PG-5 through PG-13).

(a) Material subject to stress due to pressure must conform to specifications as indicated in paragraphs PG-5 through PG-13 of section I of the ASME Boiler and Pressure Vessel Code (incorporated by reference; see 46 CFR 52.01-1) except as noted otherwise in this section.